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TASMANIA: ORNITHOLOGICALLY CONSIDERED.

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THE Island of Tasmania, lying to the south-east of Australia, is separated from the mainland by Bass Strait, which contains several groups of small islands, whose avifauna closely resembles that of itself. Some of the islands dotted about the strait are Cape Barren, Flinders, the Hunters, Three Hummock, Robbins, Furneaux, and last, but not least, King. All these islands present points of interest to the naturalist.

The birds of Tasmania present many features of interest to the ornithologist; though, compared with tropical countries, or some other areas of similar size, the number of species is but small. Then, again, being as it is the fag end of the Australian "region," its shores are not visited by any great number of northern migrants, whose wanderings cease with the southern extremity of the mainland. But, notwithstanding all these disadvantages, the avifauna of Tasmania well repays the trouble one takes to study it.

There are large tracts of country where bird-life is exceedingly scarce, such as on the west coast, where the lofty forest-trees and the heavy jungle-like undergrowth are totally unsuited for it. In nearly all the other portions of the island, however, birds are plentiful; but one does sometimes meet with stretches of country quite destitute of bird-life, even though all the conditions are apparently favourable. The indiscriminate and wholesale "ringing" of trees and firing of scrub has sadly reduced the number of species in several districts. This applies

more especially to the Wrens, Tree-Tits, and other small Passerine birds.

Including accidental and doubtful visitors, but excluding introduced species, some two hundred and fourteen species have been recorded for Tasmania and its dependencies. Of these, twenty species are, with a few exceptions, insular forms of birds found on the mainland. The species "peculiar" to Tasmania are: Hill Crow Shrike (*Strepera arguta*), Whistling Shrike Thrush (*Collyriocincla rectirostris*), Small-billed Cuckoo Shrike (*Grauculus melanops* subsp. *parvirostris*), Dusky Fantail (*Rhipidura diemenensis*), Long-tailed Blue Wren (*Malurus gouldi*), Dark-blue Wren (*M. elizabethae*), Large-billed Ground Thrush (*Geocichla macrorhyncha*), Tasmanian Tit or Brown Tail (*Acanthiza diemenensis*), Ewing's Tit (*A. ewingi*), Large-billed Tit (*A. magnirostris*), Scrub Tit (*Acanthornis magna*), Brown Scrub Wren (*Sericornis humilis*), Lesser White-backed Magpie (*Gymnorhina hyperleuca*), Grey Butcher Bird (*Cracticus destructor* subsp. *cinereus*), Grey-tailed Thickhead (*Pachycephala glaucura*), Strong-billed Honey-eater (*Melithreptus validirostris*), Black-headed Honey-eater (*M. melanocephalus*), Yellow-throated Honey-eater (*Ptilotis flavigularis*), Yellow Wattle Bird (*Acanthochæra inauris*), and the Forty-spotted Pardalote (*Pardalotus quadragintus*).

Nearly the whole of the species in the above list are but insular representatives of mainland species. In several instances the island birds have longer bills than those on the mainland; but in one, the Small-billed Cuckoo Shrike, the reverse is the case. In nearly every instance, the species "peculiar" to Tasmania are of a lustier build than their mainland cousins; but by some strange freak the Lesser White-backed Magpie is smaller than the White-backed Magpie (*G. leuconota*) found ranging over a wide area on the mainland.

Commencing with the *Falconidæ*, we find some sixteen species recorded. The only one worthy of a passing mention is the Wedge-tailed Eagle (*Uroaëtus audax*); this fine bird is rather plentiful—too plentiful—in some parts of the island, where sheep are the only animals that thrive among the rocks of the uplands. To shoot birds measuring from 6 ft. to 7 ft. 6 in. from tip to tip is no uncommon occurrence. This Eagle often becomes very bold, not hesitating to attack dogs, even when in close proximity to

their masters. The natural food of this species consists of Marsupials (young Kangaroo, Wallaby, Kangaroo-rats, &c.), and many of the larger species of birds. It nests in some lofty eucalyptus tree, or on the edge of a high cliff, most frequently well out of the reach of any inquisitive oologist. The *Bubonidæ* with two species, one a doubtful one, next claim our attention. The Boobook Owl (*Ninox boobook*) is only doubtful, inasmuch as I suspect it has really never been found in Tasmania. I might explain, that when I use the words "doubtful species" I do not mean that the species as a species is doubtful or not a well-marked one, but simply that its presence on any list of Tasmanian birds is a matter for enquiry. But to return to the Boobook Owl: I have never met with it, nor have I come across anybody who has; yet its name appears in several lists of Australasian birds as having been recorded from Tasmania. But too much reliance must not be put on that, as we know of many instances of scientific writers copying one another's errors for many years. There is no reason why this Owl should not be found here; it is for that reason I have allowed it to remain on my list.

Among the *Corvidæ*, the Hill Crow Shrike (*Strepera arguta*) requires notice. This species belongs peculiarly to Tasmania, not even being found on the adjacent islands. It was doubtless on account of its fine ringing notes that Gould gave it the specific title *arguta*. The notes "clink, clink," several times repeated, are said to have reminded him of the distant sound of the strokes of a blacksmith's hammer on the anvil. On a clear still day the notes can be heard to a great distance. It is by no means a common species, nor is it distributed throughout the island. The southern portion seems to be most favoured. The chief point of difference between this species and *S. fuliginosa* is that the under tail-coverts are white.

The nest, which is placed in fairly tall eucalyptus, is constructed of sticks and twigs, and lined with rootlets and grass.

Passing on until we come to the *Prionopidæ*, we find the Whistling Shrike Thrush (*Collyriocincla rectirostris*), or, as it is sometimes called, Selby's Shrike Thrush. This interesting species is confined to Tasmania and some of its dependencies in Bass Strait. I much regret to say that in some parts of

Tasmania it is becoming very scarce, owing chiefly, I think, to the indiscriminate burning of scrub.

To most Tasmanians this bird is familiarly known as the "Whistling Dick," on account of its noisiness and general cheerfulness. In some districts this Shrike Thrush is fairly plentiful. It always makes its presence known, long before it can be seen, with its loud and cheerful whistling notes. The denser portions of the scrub are mostly favoured by this bird; it is rarely seen in the open, except when passing across a cleared portion of the forest to get into the scrub on the other side. Caterpillars and insects of divers kinds, especially those to be found under the bark of trees, constitute its principal food. On account of its powerful bill, it is enabled with ease to strip the loose bark from the limbs and search out its prey. In those districts in which it is not disturbed by the sportsman's gun, it is not at all shy, allowing one to approach to within reasonable distance for the purpose of watching it at work. Occasionally individual birds may be seen in cleared portions, and feeding round settlers' homes.

The Small-billed Cuckoo Shrike (*Grauculus melanops* subsp. *parvirostris*), in the family *Campophagidae*, next deserves attention. This bird is found on many of the islands in Bass Strait in addition to Tasmania. It differs from *C. melanops* in having the bill slightly smaller, and the grey upper surface slightly darker. The common vernacular name of this bird is "Summer Bird." Why it goes by this name I know not, as it does not leave the island altogether in the winter. There are many districts to which it is only a summer visitor, disappearing completely as soon as the first frost whitens the ground. It is only within the last few years that it has appeared round Launceston in the winter. During June, 1899 (mid-winter), I came across an unusually large flock, consisting of twenty birds, feeding on the ground in the bush just outside Launceston. As there are several districts in Tasmania much warmer in winter than others, the "Summer Bird" congregates there until spring comes round again, when it returns to its former haunts. Parts of the east coast and the north-west corner of the island are its favourite winter resorts. During the breeding season, which lasts from October to December, it generally goes in pairs; at other times small flocks of from six to ten are usually to be

seen. Large flocks of twenty and upwards appear only during the winter months. It is tamer in winter than at any other season of the year, often allowing one to approach within a short distance. Its food consists of insects of every description, which it captures either in the air or by searching among the leaves and rubbish on the ground. This bird has no song, but has a variety of notes, which are used on different occasions. The most noticeable one is loud, shrill, and somewhat harsh. This is mostly used as an alarm or call-note. When first I heard this note I could not make out from what species of bird it emanated, it being so different from any heard before. The notes uttered during the breeding season are soft and somewhat sweet; they vary greatly, sometimes resembling a cooing sound. Lastly, there are the notes in general use. These are hard to describe, but if once heard, can never be mistaken for those of any other species; they are very peculiar, and not on the whole unpleasing. When on the wing, soft whirring notes are uttered. The flight of the "Summer Bird" is peculiar; progress is made in an undulating line, the bird rising and falling in regular waves. As it reaches the top of each imaginary wave the wings are folded, the momentum attained carrying it into another wave; the air is then smartly beaten by the wings, which action carries the bird to the top of the next wave, and so on. It is by no means possessed of strong wing power; the flight can at no time be called rapid.

Coming to the family *Muscicapidae*, several species claim more than a passing notice. First we have the Dusky Fantail (*Rhipidura diemenensis*); this interesting little species differs from the mainland *R. albiscapa* in several points. In addition to this island, it is found on several of the neighbouring islands in Bass Strait. To most people it is familiar either under the name of "Cranky Fan," or "Crazy Fantail." It is fairly evenly distributed throughout the island; in open plain country and places where there are no creeks and rivers, however, it is rare, if not altogether absent. The nest of the genus *Rhipidura* is too well-known for me to describe that of this species. In some specimens I have found, the curious tail-like appendage has been very well developed. The food of the Dusky Fantail consists almost entirely of insects, which are largely captured in the air. When

flitting from bough to bough it has a rather head-over-heels kind of flight; it is from this curious habit that it gains the name of "Cranky Fan." It is very tame in disposition, and has often been known to enter dwellings in the bush and amuse itself catching flies on the window-panes. Although preferring the vicinity of creeks and shady dells, it is no uncommon object in the gardens round and about Launceston. The bump of curiosity seems to be largely developed in this species; oftentimes have I had one or more flitting round my head and face when standing observing their habits in the bush. The flight is weak and wavering, many strange antics being performed when on the wing. The song is also weak, but pretty: I always enjoy sitting in some thickly wooded gully and listening to the Dusky Fantail pouring forth its notes to the accompaniment of a babbling rill. During the breeding season it goes about in pairs, at other times singly.

Another species of this family also worth consideration is the Long-tailed Blue Wren (*Malurus gouldi*), an insular form of the mainland *M. cyaneus*, from which it differs in being slightly larger in build, and its blue of a slightly deeper shade. Besides this island, it is found on the Furneaux group in Bass Strait. Under various names, such as "Gould's Blue Wren," "Cocktail," "Blue Cap," &c., is this beautiful little species known. It is well distributed over the greater part of Tasmania, being in some districts very plentiful. The male bird is a very amusing little fellow; the airs and graces he assumes are worth watching; he hops round with his long tail erect as though he were a very important personage, as no doubt he is in his own estimation. Along and over fallen logs he proceeds, darting suddenly to the ground when something choice catches his eye, back again on to the logs, now perching on a stump to pour out his little song, then once more all on the alert, darting after some fly, and poking his little beak into every crack and crevice, flitting his tail the while; so on he goes the live-long day, tireless in his inquisitiveness.

The Blue Wren (*M. cyaneus*) of the mainland is said to be a polygamist; so, to a certain extent, is our Blue Wren. I have often been much struck by the fact that a male often has two, and sometimes three, females following meekly after him, picking up scraps he does not consider good enough for his own lordly

little stomach. I am not altogether satisfied with this polygamous record; it is a subject that requires long and close attention, at all seasons of the year and under varying circumstances, before a really definite conclusion can be arrived at. My opinion on the subject is not as pronounced as it was a few years since; lengthened observations have somewhat modified my views. Round bush homesteads the Blue Wren becomes very tame, hopping round the doorways, and even into the passages, in search of food. When in the scrub it prefers to use its legs when moving from place to place. Its powers of running are very great, it is as nimble as a mouse; in fact, it has the appearance of one when seen a few yards off, as it scurries under and over the fallen timber. The powers of flight are rather feeble, and only resorted to when moving from one locality to another, or when suddenly frightened; it prefers to trust to its legs. The song is weak, but is a rather pleasing run of notes, uttered usually when perched on some eminence.

The Dark-blue Wren (*M. elizabethæ*) was, as Mr. A. J. Campbell tells us,* procured on King Island during the visit of the Victorian Field Naturalists' Club in 1887. At first this species was thought to be *M. gouldi*, but a subsequent examination of a long series of skins of this and other species of Wrens, "from Tasmania to the tropics," showed the King Island bird to be a good species. Mr. Campbell says †:—"The characteristics of the King Island bird are that it is the largest of all, and has a decidedly darker shade of blue—brilliant ultramarine being the nearest colour. The tail is dark-blue, while there is quite a wash of blue on the buffy white under-surface below the band of velvety black, and on the outer edge of some of the primaries. The female is similar to *M. cyaneus*, but is much larger and slightly darker brown in colour, with a slight bluish tinge in the feathers of the tail."

The species is reported as being common on the island. I am rather inclined to think that, as our knowledge of the Australian ornis extends, the three species—viz. *M. cyaneus*, *M. gouldi*, and *M. elizabethæ*—will have to be grouped under one specific name, and that *cyaneus*.

* 'Nests and Eggs of Australian Birds,' p. 1077.

† *Loc. cit.*

Putting on one side the size of *M. elizabethæ*, there is very little to distinguish it from either of the other two species. There is always a certain amount of charm about insular varieties, so that the attempt, when it comes, to lump these three species as one will be sure to meet with opposition. Having in view the advances that Australian ornithology is making, I feel sure the day is not far distant when we shall see not only the species under discussion severely dealt with, but also several other cherished insular forms treated in a similar manner.

The subfamily *Turdinæ*, containing the Large-billed Ground Thrush (*Geocichla macrorhyncha*), comes next under review. This handsome Thrush, which is but an insular variety of *G. lunulata* of the mainland, is found, in addition to Tasmania, on several of the neighbouring islands. Gould hesitated some time before deciding to treat *G. macrorhyncha* as a distinct species. The Tasmanian species is somewhat more bulky, and has a stouter bill than its mainland cousin; it is fairly well distributed throughout the island, well-wooded and moist gullies being its favourite haunts. As may be expected, insects and seeds constitute the diet of the species; the insects are almost entirely procured from out of the ground, and from among fallen leaves and twigs. This Thrush seldom employs its wings, which are not really strong, but trusts rather to its legs; the rapidity with which it can move from place to place is really astonishing. Being much of the colour of the soil, it is difficult in the gathering gloom to follow its movements with accuracy. The note is a very pretty low whistle, to be heard issuing from the scrub early in the morning while the grass and leaves are yet wet with dew; also at dusk.

The group *Acanthizinæ*, of the subfamily *Timeliinæ*, contains no fewer than five species worthy of consideration. The Tasmanian Tit, or Brown Tail (*Acanthiza diemenensis*), is found on some of the Bass Strait Islands in addition to Tasmania. The species is very plentiful in some parts of this island; it moves in flocks varying in number from ten to thirty, if not more. Open forest country is its favourite haunt, where it moves from tree to tree with quick eager movements as it searches out the insects on the leaves and under the bark. Occasionally I have disturbed a flock feeding close to the ground

among fallen scrub. One of its vernacular names is "Badger Bird"—why, I know not.

Ewing's Tit (*A. ewingi*), which was figured by Gould, had been lost sight of until Mr. A. G. Campbell rediscovered it on King Island in November, 1902; he also procured a specimen in the gullies on Mount Wellington, near Hobart, in November, 1903. Col. Legge informs us that a specimen was found in a small collection recently acquired by the Hobart Museum from the New Norfolk district. Now that the species has had its identity placed beyond dispute, it remains for field naturalists to ascertain its range in this island. It is distinguished from *A. diemenensis* chiefly by the dark "winglet," rufous forehead, greater length of tail, and longer tarsus. It is also darker on the upper surface, throat, and abdomen.

The Long-billed Tit (*A. magnirostris*) was also discovered by Mr. A. G. Campbell during his trip to King Island in November, 1902. This species, as Mr. A. J. Campbell tells us, has more of the black and white mottled under-surface than *A. diemenensis*; it is also remarkable for the great size of its bill.

The Scrub Tit (*Acanthornis magna*) is confined to Tasmania alone, where it is found in the neighbourhood of Mount Wellington, and is also reported to be not uncommon round Mount Bischoff. In some other and similar localities it is also found, but in no district is it at all common. Placed originally among the *Acanthizæ*, it was transferred to the genus *Sericornis*, but Col. Legge has founded a new genus for its reception, viz. *Acanthornis*.

In addition to Tasmania, the Brown Scrub Wren (*Sericornis humilis*) is found on some of the adjacent islands. The species is more plentiful than the one just referred to. It also frequents more open and accessible country, though it is very fond of tracts with an abundance of undergrowth, where it procures its food and rears its young. It is a fast runner, and somewhat shy, so that it is with difficulty that one obtains a good view of it in the scrub. Some few months since I was fortunate enough to see six or eight birds of this species searching for insects among the grass and leaves and small bushes in a partly cleared patch. It was necessary for me to

remain very still; after watching them for a while, I made a slight movement, when they all scurried off into the scrub.

Passing to the family *Laniidae*, the Lesser White-backed Magpie (*Gymnorhina hyperleuca*) well merits a note. It is confined solely to Tasmania, where it is very common in some parts, but altogether wanting in others. The northern and agricultural districts are its strongholds. To Tasmania belongs the privilege of being the first Australasian State to recognize the Magpie as being of economic value, and to extend protection to it as such. In 1879, under the Game Protection Act, 42 Vict., No. 24, it was decreed that whosoever killed the birds or destroyed their eggs would be liable to a penalty not exceeding £1. In 1885 this Act was extended under 48 Vict., No. 35, so that persons could not buy, sell, or offer for sale birds of this species. Notwithstanding this, large numbers of young birds are taken annually and sold in the towns. When not engaged in seeking food, most of its time is spent among the branches of lofty trees. Flocks of from six to a dozen individuals are usually seen; occasionally larger ones may be observed (I have counted as many as forty-seven birds together at one time); round Conara (the native name of the Magpie) and other midland districts even larger flocks are to be seen. It is one of the best, if not the best, feathered friend the farmer has, and is a beautiful songster, its voice being both very powerful and melodious. It is sometimes a strange experience to hear a chorus of Magpies during the middle of a moonlight night.

The Grey Butcher Bird (*Cracticus destructor* subsp. *cinereus*) is closely allied to the mainland *C. destructor*. This species is confined to Tasmania, and is fairly plentiful in parts, especially in the bush round towns and settlements. Its vernacular name is that of "Jackass." Its favoured haunts are thickly timbered tracts, where it can find an abundance of insect and animal life to satisfy its wants. During the winter it may be observed picking scraps of fat off sheep and other skins hanging on farm fences. Like its English cousin, our Butcher Bird often impales its victims on long thorns. One larder I found consisted of two callow nestlings of some small bird, the remains of a Mouse, and a number of large beetles; another consisted of two Sparrows. The notes of the Jackass are hard to describe, being

rather "a jumble of discordant sounds." Nevertheless, the efforts of a number of these birds singing in the early morning are far from being unpleasant. The notes are very loud, and can be heard for some considerable distance.

The White-throated Thickhead (*Pachycephala gutturalis*) is included in my list on the authority of Col. Legge.

Tasmania and some of its neighbouring islands possess a Thickhead—the Grey-tailed Thickhead (*P. glaucura*)—peculiar to their shores. This species is fairly common in well-wooded gullies and hillsides in some parts of the island, from whence its fine whistling notes may be often heard. It is rather shy, and prefers to keep out of sight if it knows it is being watched.

In no list can I find mention of any members of the family *Certhiidae* being found in Tasmania. I have met with both the White-throated Tree-runner (*Climacteris leucophaea*) and the Brown Tree-runner (*C. scandens*) in some of the heavily timbered forests in the north-eastern portion of the island; forests consisting mainly of big timber.

The family *Meliphagidae* contains four species peculiar to this and the adjacent islands. Three species—viz. the Strong-billed Honeyeater (*Melithreptus validirostris*), Black-headed Honeyeater (*M. melanocephalus*), and the Yellow-throated Honeyeater (*Ptilotis flavigularis*)—are only worthy of a passing remark. They are all more or less plentiful in those parts of the island where there are plenty of eucalyptus and banksia blossoms for them to feed on. The yellow-throated species obtains a good portion of its food from off the ground.

The Yellow Wattle-Bird (*Acanthochæra inauris*) is confined to this island and King's. Only certain favourable districts are frequented—favourable both as regards food and climate. Altogether the species is very irregularly distributed through the island. It is among the most highly esteemed of our game birds; and it was owing to the great slaughter that had taken place during the past few years, and the fear that the species was in danger of extermination, that it was afforded absolute protection from January 1st, 1902, to May 24th, 1904. Some fairly large bags have been reported this season, which extends from May 24th to July 31st, both inclusive. During the seasons

in which flowering eucalyptus is plentiful, the birds become very fat, and weigh at least six ounces. In the winter its food consists of rich nectar from eucalyptus blossoms and honeysuckle (banksia) cones. In summer, as the honeysuckle alone is in flower, insects, especially beetles, are added to its diet. In some districts the eucalyptus blossoms one year, and in another district the next; the consequence is that the Wattle Bird moves from one district to another in search of food. I have found it to be very plentiful one season, and the next hardly a bird was to be seen or heard. In summer it resorts to the mountain-slopes, returning to the plains as winter approaches; the harder the winter frosts, the more plentiful is the bird expected to be; the thickly-wooded plains are warmer than the mountain-sides. It soon becomes very wild after being shot at, and is difficult to approach, giving the alarm and taking flight at the least sign of danger. It moves in flocks, which vary greatly in number. I do not know whether, as a rule, the Wattle Bird sleeps at its feeding-ground, but at the first glimmer of daylight it can be heard among the tree-tops. I have watched large flocks leaving their feeding-ground at dusk, and moving further into the bush. The voice of this species is very remarkable, and, once heard, is not likely to be easily forgotten or mistaken for that of any other species. The cry is loud and harsh, and is between a cough and a scolding voice suffering from a cold in the throat.

In the family *Dicaeidae*, the Forty-spotted Pardalote (*Pardalotus quadragintus*) is peculiar to both Tasmania and King Island. This tiny Pardalote is only met with in certain parts of the island; it spends most of its time among the tops of lofty forest trees, principally in gullies. The colour of its plumage approximates so closely to that of the foliage among which it spends most of its time, that it is but rarely seen, unless specially searched for. It usually moves in small bands of from four to a dozen individuals.

The White-rumped Swift (*Micropus pacificus*), family *Cypselidae*, is only an occasional visitor, sometimes accompanying bands of Spine-tailed Swifts (*Chætura caudacuta*) on their brief visits to our shores.

The Black Cockatoo (*Calyptorhynchus funereus*) is looked

upon by many bush-dwellers as a sure weather prophet, for they say that when it is going to be stormy the Black Cockatoo flies very low, and is exceedingly noisy. I have noticed the same thing myself. A belt of rung timber presents a very curious appearance after a flock of these birds has passed through. The bark hangs from every tree in long strips as it was torn off by the powerful bills of the birds in search of grubs. The White Cockatoo (*Cacatua galerita*) is very plentiful in some districts, and is very destructive to sprouting grain.

The Greater Brown Quail (*Synæcus diemenensis*), of the family *Phasianidæ*, is not considered by the British Museum authorities to be a good species, but I can assure those gentlemen that all field naturalists and observant sportsmen are quite convinced of its validity. It is larger and much more handsomely marked than the ordinary Brown or Swamp Quail; there is also a marked difference in the eggs of the two birds.

Of the Plovers, the Black-breasted (*Zonifer tricolor*) is the most plentiful. The fine Spur-wing (*Lobivanellus lobatus*) is confined to a more restricted area. Both the Grey (*Squatarola helvetica*) and the Lesser Golden (*Charadrius dominicus*) are met with in the midland districts fairly plentifully.

I will leave the review of the aquatic species until some future date, as my paper has already become of inordinate length. I have tried to give a little interesting information about some of the species found in this, the "Emerald Isle" of the south; but there are others, although not "peculiar," about which I would have liked to have spoken.

The subjoined list of birds found in, and about the shores of, Tasmania and its dependencies is, to the best of my ability, a full and correct one. As I have elsewhere indicated, the list will doubtless require modifying and extending as we become better acquainted with many species about which there exists uncertainty and doubt:—

ACCIPITRES.

Circus assimilis, Jard. & Selby (Spotted Harrier). *C. gouldi*, Bonap. (Harrier or Swamp-Hawk). *Astur novæ-hollandiæ*, Gmelin (White Gos-Hawk). *A. approximans*, Vigors & Horsf. (Gos-Hawk). *Accipiter cirrhacephalus*, Vieill. (Sparrow-Hawk). *Uroaëtus audax*, Lath. (Wedge-tailed Eagle). *Haliaëtus leucogaster*, Gmelin (White-bellied Sea Eagle).

Falco melanogenys, Gould (Black-cheeked Falcon). *F. lunulatus*, Lath. (Little Falcon). *Hieracidea orientalis*, Schlegel (Brown Hawk). *Cerchneis cenchroides*, Vig. & Horsf. (Nankeen Kestrel). *Pandion haliaetus* subsp. *leucocephalus*, Gould (White-headed Osprey). *Ninox boobook*, Lath. (Boobook Owl) (doubtful). *N. maculata*, Vig. & Horsf. (Spotted Owl). *Strix novaehollandiae* subsp. *castanops*, Gould (Chestnut-faced Owl).

PASSERES.

Corvus coronoides, Vig. & Horsf. (Crow). *Corone australis*, Gould (Raven). *Strepera arguta*, Gould (Hill Crow Shrike). *S. fuliginosa*, Gould (Sooty or Black Crow-Shrike). *Chibia bracteata*, Gould (Drongo) (accidental). *Grallina picata*, Lath. (Magpie Lark) (accidental). *Collyriocincla rectirostris*, Jard. & Selby (Whistling Shrike-Thrush). *Grauculus melanops* subsp. *parvirostris*, Gould (Small-billed Cuckoo-Shrike). *Lalage tricolor*, Swains. (White-shouldered Caterpillar-eater) (accidental). *Rhipidura diemenensis*, Sharpe (Dusky Fantail). *Myiagra rubecula*, Lath. (Leaden-coloured Flycatcher). *M. nitida*, Gould (Satin Flycatcher). *Petræca leggi*, Sharpe (Scarlet-breasted Robin). *P. phænicea*, Gould (Flame-breasted Robin). *P. rhodinogastra*, Drapier (Pink-breasted Robin). *Amaurodryas (Petræca) vittata*, Quoy & Gaim. (Dusky Robin). *Malurus gouldi*, Sharpe (Long-tailed Blue Wren). *M. elizabethæ*, Campbell (Dark-blue Wren). *Acrocephalus australis*, Gould (Reed Warbler). *Geocichla macrorhyncha*, Gould (Large-billed Ground-Thrush). *Ephthianura albifrons*, Jard. & Selby (White-fronted Chat). *Stipiturus malachurus*, Lath. (Emu Wren). *Megalurus gramineus*, Gould (Grass-Bird). *Acanthiza diemenensis*, Gould (Tasmanian Tit, Brown Tail). *A. ewingi*, Gould (Ewing's Tit). *A. magnirostris*, Campbell (Large-billed Tit). *A. chrysorrhoa*, Quoy & Gaim. (Yellow-rumped Tit). *Acanthornis magna*, Gould (Scrub Tit). *Sericornis humilis*, Gould (Brown Scrub-Wren). *Cinclosoma punctatum*, Lath. (Spotted Ground Bird). *Calamanthus fuliginosus*, Vig. & Horsf. (Striated Field-Wren). *Gymnorhina hyperleuca*, Gould (Lesser White-backed Magpie). *Cracticus destructor*, Temm., subsp. *cinereus*, Gould (Grey Butcher Bird). *Pachycephala olivacea*, Vig. & Horsf. (Olive Thickhead). *P. gutturalis*, Lath. (White-throated Thickhead) (doubtful). *P. glaucura*, Gould (Grey-tailed Thickhead). *Climacteris leucophaea*, Lath. (White-throated Tree-runner). *C. scandens*, Temm. (Brown Tree-runner). *Zosterops cærulescens*, Lath. (White-eye). *Acanthorhynchus tenuirostris*, Lath. (Spine-bill). *Melithreptus validirostris*, Gould (Strong-billed Honeyeater). *M. melancephalus*, Gould (Black-headed Honeyeater). *Glyciphila fulvifrons*, Lewin (Fulvous-fronted Honeyeater). *Ptilotis flavigularis*, Gould (Yellow-throated Honeyeater). *Meliornis australasiana*, Shaw (Crescent

Honeyeater). *M. novæ-hollandiæ*, Lath. (White-bearded Honeyeater). *Manorhina garrula*, Lath. (Garrulous Honeyeater). *Acanthochæra inauris*, Gould (Yellow Wattle-Bird). *A. mellivora*, Lath. (Brush Wattle-Bird). *Pardalotus affinis*, Gould (Yellow-tipped Pardalote). *P. punctatus*, Temm. (Spotted Pardalote). *P. quadragintus*, Gould (Forty-spotted Pardalote). *Hirundo neoxena*, Gould (Welcome Swallow). *Petrochelidon nigriceps*, Vieill. (Tree Martin). *P. ariel*, Gould (Fairy Martin). *Anthus australis*, Vig. & Horsf. (Ground Lark or Pipit). *Artamus sordidus*, Lath. (Wood-Swallow). *Zonæginthus bellus*, Lath. (Fire-tailed Finch).

PICARÆ.

Micropus pacificus, Lath. (White-rumped Swift) (occasional visitor). *Chætura caudacuta*, Lath. (Spine-tailed Swift). *Podargus strigoides*, Lath. (Tawny Frogmouth, Morepork). *Ægotheles novæ-hollandiæ*, Lath. (Little Nightjar). *Alcyone azurea*, Lath. (Blue Kingfisher). *Halcyon sanctus*, Vig. & Horsf. (Sacred Kingfisher). *Cuculus pallidus*, Lath. (Pallid Cuckoo). *C. flabelliformis*, Lath. (Fantailed Cuckoo). *Chalcococcyx plagosus*, Lath. (Bronze Cuckoo). *C. basalis*, Horsf. (Narrow-billed Bronze Cuckoo). *C. lucidus*, Lath. (Broad-billed Bronze Cuckoo). *Scythrops novæ-hollandiæ*, Lath. (Channel-bill Cuckoo) (accidental).

PSITTACI.

Trichoglossus novæ-hollandiæ, Gmelin (Blue-bellied Lorikeet). *Glossopsittacus concinnus*, Shaw (Musk Lorikeet). *G. pusillus*, Shaw (Little Lorikeet). *Calyptorhynchus funereus*, Shaw (Black Cockatoo). *Callocephalon galeatum*, Lath. (Gang-gang Cockatoo). *Cacatua galerita*, Lath. (White Cockatoo). *Platycercus flaviventer*, Temm. (Green Parrakeet). *P. eximius*, Shaw (Rosella). *Neophema venusta*, Temm. (Blue-banded Grass-Parrakeet). *N. chrysogastra*, Lath. (Yellow-bellied Grass-Parrakeet). *Nanodes discolor*, Shaw (Swift Parrakeet). *Pezoporos formosus*, Lath. (Ground Parrakeet).

COLUMBÆ.

Ptilopus superbus, Temm. (Purple-crowned Fruit-Pigeon) (accidental). *Lopholamus antarcticus*, Shaw (Top-knot Pigeon) (accidental). *Phaps chalcoptera*, Lath. (Bronze-wing Pigeon). *P. elegans*, Temm. (Brush Bronze-wing Pigeon).

GALLINÆ.

Coturnix pectoralis, Gould (Stubble Quail). *Synæcus diemenensis*, Gould (Greater Brown Quail). *S. australis*, Temm. (Brown Quail).

HEMIPODII.

Turnix varia, Lath. (Painted Quail).

FULICARIAE.

Hypotænidia brachypus, Swains. (Slate-breasted (Lewins') Rail). *H. philippensis*, Linn. (Pectoral Rail). *Porzana fluminea*, Gould (Spotted Crake). *P. palustris*, Gould (Little Crake). *P. tabuensis*, Gmelin (Spotless Crake). *Tribonyx mortieri*, Du Bus. (Native Hen). *Porphyrio melanonotus*, Temm. (Bald Coot). *Fulica australis*, Gould (Coot).

LIMICOLÆ.

Burhinus (Ædicnemus) grallarius, Lath. (Stone Plover). *Are-naria interpres*, Linn. (Turnstone). *Hæmatopus longirostris*, Vieill. (Pied Oystercatcher). *H. unicolor*, Wagler (Black Oystercatcher). *Lobivanellus lobatus*, Lath. (Spur-winged Plover). *Zonifer tricolor*, Vieill. (Black-breasted Plover). *Squatarola helvetica*, Linn. (Grey Plover). *Charadrius dominicus*, Muller (Lesser Golden Plover). *Ochthodromus (Ægialitis) bicinctus*, Jard. & Selby (Double-banded Dottrel). *Ægialitis ruficapilla*, Temm. (Red-capped Dottrel). *Æ. melanops*, Vieill. (Black-fronted Dottrel) (accidental). *Æ. cucullata*, Vieill. (Hooded Dottrel). *Himantopus leucocephalus*, Gould (White-headed Stilt). *Cladorhynchus pectoralis*, Du Bus. (Banded Stilt). *Recurvirostra novæ-hollandiæ*, Vieill. (Red-necked Avocet). *Numenius cyanopus*, Vieill. (Australian Curlew). *N. phæopus* subsp. *variegata*, Salvad. (Whimbrel). *Limosa novæ-zealandiæ*, Gray (Barred-rumped Godwit). *Tringoides hypoleucus*, Linn. (Common Sandpiper). *Glottis nebularius*, Gunner. (Greenshank). *Limonites ruficollis*, Pallas (Little Stint). *Heteropygia acuminata*, Horsf. (Marsh Stint). *Ancyllochilus subarcuatus*, Gmel. (Curlew Stint). *Gallinago australis*, Lath. (Australian Snipe).

GAVIAE.

Sterna (Hydroprogne) caspia, Pallas (Caspian Tern). *S. poliocerca*, Gould (Bass Strait Tern). *S. frontalis*, Gray (White-fronted Tern). *S. neries*, Gould (White-faced Tern). *S. anæsthetia*, Scop. (Brown-winged (Panayan) Tern) (doubtful). *S. fuliginosa*, Gmelin (Sooty Tern) (doubtful). *Larus novæ-hollandiæ*, Steph. (Silver Gull). *Larus (Gabianus) pacificus*, Lath. (Pacific Gull). *Megalestris antarctica*, Less. (Antarctic Skua). *Stercorarius crepidatus*, Banks (Richardson's Skua).

TUBINARES.

Oceanites oceanicus, Kuhl. (Yellow-webbed Storm-Petrel). *Garrodia nereis*, Gould (Grey-backed Storm-Petrel). *Pelagodroma marina*, Lath.

(White-faced Storm-Petrel). *Cymodroma melanogaster*, Gould (Black-bellied Storm-Petrel). *C. grallaria*, Vieill. (White-bellied Storm-Petrel). *Puffinus chlororhynchus*, Lesson (Wedge-tailed Petrel). *P. assimilis*, Gould (Allied Petrel). *P. carneipes*, Gould (Fleshy-footed Petrel) (doubtful). *P. tenuirostris*, Temm. (Short-tailed Petrel, Mutton Bird). *P. gavia*, Forster (Forster Petrel) (doubtful). *Priopinus cinereus*, Gmelin (Grey (Brown) Petrel). *Priocella glacialisoides*, Smith (Silver-grey Petrel). *Majaqueus parkinsoni*, Gray (Black Petrel). *Oestrelata macroptera*, Smith (Great-winged Petrel). *O. lessoni*, Garnot (White-headed Petrel). *O. mollis*, Gould (Soft-plumaged Petrel). *O. solandri*, Gould (Brown-headed Petrel). *O. leucoptera*, Gould (White-winged Petrel). *Ossifraga gigantea*, Gmelin (Giant Petrel). *Daption capensis*, Linn. (Cape Petrel). *Halobaena caerulea*, Gmelin (Blue Petrel). *Prion desolatus*, Gmel. (Dove Prion). *P. ariel*, Gould (Fairy Prion). *P. banksi*, Smith (Banks' Prion). *P. vittatus*, Illiger (Broad-billed Prion). *Pelecanoides urinatrix*, Gmel. (Diving Petrel). *Diomedea exulans*, Linn. (Wandering Albatross). *D. melanophrys*, Temm. (Black-browed Albatross). *Thalassogeron cautus*, Gould (White-capped Albatross). *T. culminatus*, Gould (Flat-billed Albatross). *T. chlororhynchus*, Gmel. (Green-billed Albatross). *Phaethetria fuliginosa*, Gmel. (Sooty Albatross).

PLATALEÆ.

Carphibis spinicollis, Jameson (Straw-necked Ibis) (accidental).
Plegadis falcinellus, Linn. (Glossy Ibis).

HERODIONES.

Notophoyx pacifica, Lath. (Pacific Heron). *N. novæ-hollandiæ*, Lath. (White-fronted Heron). *Demiegretta sacra*, Gmelin (Reef Heron). *Herodias timoriensis*, Lesson (White Egret). *Nycticorax caledonicus*, Gmel. (Night Heron). *Botaurus pæciloptilus*, Wagler (Bittern).

STEGANOPODES.

Phalacrocorax carbo, Linn. (Black Cormorant). *P. sulcirostris*, Brandt (Little Black Cormorant). *P. gouldi*, Salv. (White-breasted Cormorant). *P. melanoleucus*, Vieill. (Little Cormorant). *Sula serrator*, Banks (Australian Gannet). *Pelecanus conspicillatus*, Temm. (Pelican).

PYGOPODES.

Podicipes novæ-hollandiæ, Steph. (Black-throated (Little) Grebe). *P. nestor*, Gould (Hoary-headed Grebe). *P. cristatus*, Linn. (Tippet Grebe).

IMPENNES.

Catarrhactes chrysocome, Forst. (Crested Penguin). *Eudyptula minor*, Forst. (Little Penguin). *E. undina*, Gould (Fairy Penguin).

CHENOMORPHÆ.

Chenopsis atrata, Lath. (Black Swan). *Anseranas semipalmata*, Lath. (Pied Goose). *Cereopsis novæ-hollandiæ*, Lath. (Cape Barren Goose). *Chenonetta jubata*, Lath. (Wood Duck) (accidental). *Dendrocygna eytoni*, Gould (Eyton's Tree Duck). *Casarca tadernoides*, Jard. (Shielddrake or Mountain Duck). *Anas superciliosa*, Gmelin. (Black Duck). *Nettion castaneum*, Eyton (Teal). *N. gibberifrons*, Muller (Grey Teal). *Spatula rhynchos*, Lath. (Shoveler). *Malacorhynchus membranaceus*, Lath. (Pink-eared Duck, Wigeon). *Sictionetta nævosa*, Gould (Freckled Duck) (accidental). *Nyroca australis*, Gould (White-eyed Duck, Hardhead). *Erismatura australis*, Gould (Blue-billed Duck). *Biziura lobata*, Shaw (Musk Duck).

BIRD-LIFE IN JERSEY.

By Sergeant H. MACKAY, 2nd H.L.I.

THE fascinating study of the lives of birds, their mysterious migratory movements and marvellous obedience to that peculiar instinct which compels certain species to wander from one country to another as the seasons of the year demand, is a never-failing source of interest to the ornithological student. I have, however, no desire at the present time to discuss that strange law by which the movements of birds are governed, but merely to submit the result of observations on the feathered inhabitants of Jersey, both resident and migratory.

Apart from my own personal observations, I am indebted to several gentlemen who have very kindly permitted me to examine their collections of Jersey-taken specimens, and especially to Mr. Caplin and Mr. Romeril, the latter a life-long and thoroughly reliable observer of bird-life, whose collection consists of specimens procured personally, and skilfully mounted by his own hands.

As I have seen but little mention of the Channel Islands in any ornithological work that I have had access to,* I thought the compilation of a list of specimens obtained in Jersey might possibly prove of some small service to those interested in this subject.

I may further add that all observations have been conducted in a manner calculated to ensure complete and accurate information of the various species referred to.

MISTLE-THRUSH (*Turdus viscivorus*).—Common throughout the island, more plentiful during the winter months.

SONG-THRUSH (*T. musicus*).—Common all over the island.

REDWING (*T. iliacus*).—Plentiful during the winter months.

FIELDFARE (*T. pilaris*).—A regular winter visitor, but not so numerous as the foregoing species.

* Cf. Gordon Dalgliesh, "Ornithological Notes from Guernsey" (Zool. 1908, pp. 281 and 277).—ED.

BLACKBIRD (*T. merula*).—Common.

RING-OUZEL (*T. torquatus*).—This species is occasionally obtained here, but principally during the months of September and October, the usual period of its migration southwards. The last recorded specimen was taken on Oct. 8th, 1900.

WHEATEAR (*Saxicola axanthe*).—Plentiful during the summer months.

STONECHAT (*Pratincola rubicola*).—Common everywhere, especially around Fort Regent and the vicinity.

REDSTART (*Ruticilla phoenicurus*).—Scarce. Observed a male specimen close to Fort Regent on Feb. 1st, 1904.

BLACK REDSTART (*R. titys*).—This species is also scarce. Saw a female specimen on the roadway leading to the Fort, April 4th, 1903. Mr. Romeril informs me that these birds occur but rarely in Jersey, he having only seen a few at long intervals during many years of observation.

REDBREAST (*Erythacus rubecula*).—Fairly common throughout the island.

WHITETHROAT (*Sylvia cinerea*).—Common.

GOLDEN-CRESTED WREN (*Regulus cristatus*).—Obtained occasionally on migration.

FIRE-CRESTED WREN (*R. ignicapillus*).—Mr. Romeril informs me that this species is more plentiful than the foregoing during the winter months.

HEDGE-SPARROW (*Accendor modularis*).—Common.

GREAT TIT (*Parus major*).—Sparsely distributed throughout the island.

BLUE TIT (*P. caeruleus*).—More plentiful than the foregoing.

WREN (*Troglodytes parvulus*).—Fairly common. While on my way to the Fort on the morning of Oct. 26th, 1903, I observed large numbers of Wrens in the hedges around South Hill. I counted no fewer than eleven birds on one isolated bush, while considerable numbers were twittering and fluttering about the bottom of the hedges in a most excited manner. I have never at any time seen so many Wrens together, and can only account for their appearance at that time as due to passing migration. On the following day they had all disappeared.

PIED WAGTAIL (*Motacilla lugubris*).—Saw two of this species

near South Hill on May 14th, 1903. These are the only specimens I have seen.

GREY WAGTAIL (*M. melanope*).—Observed two examples on the barrack square at Fort Regent on Oct. 29th, 1903, and have since seen several specimens moving about the shallow stream which runs through the Valley de Veaux.

MEADOW-PIPIP (*Anthus pratensis*).—Common everywhere throughout the island. Many birds feed on the barrack square and grassy ramparts of the Fort.

TREE-PIPIP (*A. trivialis*).—Have observed several specimens around the Fort during the summer months.

GREAT GREY SHRIKE (*Lanius excubitor*).—Not uncommon during the winter months.

RED-BACKED SHRIKE (*L. collurio*).—Fairly common throughout the island, nesting in suitable localities.

PIED FLYCATCHER (*Muscicapa atricapilla*).—Fairly common during the summer, and nests on the island.

SWALLOW, MARTIN, SAND-MARTIN, and SWIFT.—All common during summer, particularly the Swift.

GREENFINCH (*Ligurinus chloris*).—Common everywhere throughout the island.

HAWFINCH (*Coccothraustes vulgaris*).—Only a few specimens are on record as having been obtained in Jersey. Mr. Caplin and Mr. Romeril each have specimens in their collections.

GOLDFINCH (*Carduelis elegans*).—This species is not so much in evidence as in former years, and is evidently decreasing. Its market value as a cage-pet is, and always will be, accountable for its decrease everywhere. A pair nested and reared their young on a plum-tree in a garden below Fort Regent this year.

HOUSE-SPARROW (*Passer domesticus*).—Common.

CHAFFINCH (*Fringilla cælebs*).—Fairly common throughout the island.

BRAMBLE-FINCH (*F. montifringilla*).—This species is occasionally obtained during the winter months, principally when severe weather prevails in the north.

LINNET (*Linota cannabina*).—Common. Large numbers nest in suitable situations around the Fort.

BULLFINCH (*Pyrrhula europea*).—Saw one specimen on a tree in a corner of Fort Regent, March 3rd, 1903. This is the only

one I have observed, and I am informed it occurs but rarely on the island.

CROSSBILL (*Loxia curvirostra*).—This species has occasionally been obtained on migration.

YELLOW BUNTING (*Emberiza citrinella*).—Fairly common throughout the island.

SNOW-BUNTING (*Plectrophenax nivalis*).—According to records produced by Mr. Caplin and Mr. Romeril, this species has only been obtained in very severe winters. The last two specimens recorded were obtained on Oct. 25th, 1900.

STARLING (*Sturnus vulgaris*).—Common. Eighteen or twenty years ago Starlings were comparatively rare in Jersey, but since then they have gradually increased to abundance. This increase has been general almost all over the British Isles.

JAY (*Garrulus glandarius*).—Fairly common in the more wooded parts of the island. A fine male example was forwarded to me from St. Peter's Valley for preservation in January this year.

MAGPIE (*Pica rustica*).—This species, locally named the "Jersey Pheasant," on account of its long tail, is one of the commonest birds on the island.

CARRION-CROW (*Corvus corone*).—Common.

HOODED CROW (*C. cornix*).—This species is by no means common, and usually arrives in October, about the same time as the Woodcock.

ROOK (*C. frugilegus*).—Common.

SKY-LARK (*Alauda arvensis*).—Abundant everywhere on the island.

NIGHTJAR (*Caprimulgus europaeus*).—Fairly common during the summer months. A specimen shown to me was obtained as late as Nov. 25th, 1903.

KINGFISHER (*Alcedo ispida*).—Sparsely distributed throughout the island. Observed two specimens near the diving-stage at La Collette, Nov. 14th, 1903.

BEE-EATER (*Merops apiaster*).—Only two specimens taken here are on record, the last being obtained during the summer of 1892.

HOOPOE (*Upupa epops*).—Mr. Romeril has in his possession a Hoopoe, shot on his farm thirty years ago; since then—

up till November, 1903, when he observed a bird in a field near Gorey—he had not seen a single specimen. Mr. Caplin, however, informs me that very few seasons pass without a specimen or more being recorded, and kindly gave me the dates of the last three examples taken—April, 1900, 1902, 1903. This year Mr. Caplin has had two specimens—one taken on April 16th, and another on May 21st.

CUCKOO (*Cuculus canorus*).—Common during the summer. The Cuckoos were quite as numerous around the Fort this year as they were last season, but for some reason or other have been remarkably silent this year. Throughout the whole of May and June, and part of July, 1903, its familiar call was heard daily in the vicinity of Fort Regent, but this summer it has been very seldom heard, although birds are plentiful. Perhaps the cold north-east winds and unfavourable weather during May and the early part of June may possibly account for its protracted silence. There was much discussion some years ago in 'The Zoologist' with regard to the Cuckoo calling on the wing, some writers averring that such was of rare occurrence. It is many years ago since I first heard the Cuckoo utter its familiar call during flight, and here in Jersey it is commonly observed as the bird crosses the Fort, or flies from one tree to another.

LONG-EARED OWL (*Asio otus*).—Sparsely distributed throughout the island, and usually obtained during the winter months.

SHORT-EARED OWL (*A. accipitrinus*).—Obtained chiefly in winter, and much scarcer than the former species.

MARSH-HARRIER (*Circus aeruginosus*).—Mr. Romeril has a fine male specimen of the Marsh-Harrier in his possession, which was obtained on his farm about 1874, and is the only recorded specimen taken in Jersey.

COMMON BUZZARD (*Buteo vulgaris*).—This species is met with occasionally, both Mr. Caplin and Mr. Romeril having specimens in their collections.

SPARROW-HAWK (*Accipiter nisus*).—Fairly common. Nesting in suitable localities.

PEREGRINE FALCON (*Falco peregrinus*).—This handsome species of the Hawk family has been obtained frequently in Guernsey, although but few are recorded in Jersey. A fine male specimen was taken in Guernsey on Dec. 26th, 1903.

MERLIN (*F. æsalon*).—Sparsely distributed over the island. I had a female specimen sent me for preservation on Oct. 21st, 1903.

KESTREL (*F. tinnunculus*).—Fairly common. Nesting in suitable situations.

Albino Kestrel.—Mr. Romeril has a white specimen of the Kestrel in his collection, which was obtained by him some years ago. It is pure white with the exception of about half a dozen buffish-coloured feathers sprinkled over the back and wings.

COMMON HERON (*Ardea cinerea*).—This species wanders occasionally to the Channel Isles, two or three birds being usually obtained during the winter months.

COMMON BITTERN (*Botaurus stellaris*).—Only three of this species are known to have been taken on the island, the last record being December, 1899.

RING-DOVE (*Columba palumbus*).—Fairly common in the wooded parts of the island.

TURTLE-DOVE (*Turtur communis*).—Common in the woods around Grève de Lecq and St. Peter's Valley during the summer.

(To be continued.)

NOTES AND QUERIES.

MAMMALIA.

"Elephant Cemeteries."—There has recently been some discussion in the papers relative to the stock of ivory lying at the London Docks, and it has been stated that at least 85 per cent. of the supply is "dead ivory" obtained from "Elephant cemeteries," spots met with here and there in the jungle where Elephants have resorted for centuries to die. Very few of these spots seem to have been discovered by travellers, and scarcely any record is to be found in books of travel. On recently consulting an old work in my possession, 'African Memoranda relative to an Attempt to establish a British Settlement on the Island of Bulama,' &c., by Capt. Philip Beaver, published in 1805, I came across the following passage:—"That district of the Biafara country which is comprised between the river issuing from the Geba Lake (which empties itself into the sea a little below Courbaly to the eastward of Bissao) and the Rio Grande, together with the island of Bulama, abounds with Elephants. The number of these animals on this little island almost exceeds belief; it was nearly impossible for us to proceed fifty yards inland without meeting recent and palpable vestiges of them, and the skeletons of old ones that had died in the woods were frequently found." The writer also proceeded to say that, although these animals frequently swam across that arm of the sea which separates Bulama from the Biafara peninsula, which is about two miles in breadth, none were ever seen attempting to swim back to the continent.—W. L. DISTANT.

Daubenton's Bat (*Myotis daubentonii*) in Middlesex.—One evening last August, as a friend and I were standing on the bridge near Teddington Lock, we observed a number of Bats flying low over the water. I suspected they might be *Myotis daubentonii*, and we resolved to try and "angle" for them. We baited a very small fish-hook with a small piece of tissue-paper; this, being attached to a long piece of cotton, was allowed to float over the bridge a few feet from the surface of the water. In about five minutes we felt a tug, and found a Bat had been caught. This proved to be the above species.—GORDON DALGLIESH (29, Larkfield Road, Richmond, Surrey).

AVES.

The Marsh-Warbler (*Acrocephalus palustris*) in Oxfordshire: a new Position for the Nest.—I may be allowed to supplement former notes on this subject by a brief statement of my experience of the last two seasons. These birds have never failed to return to their favourite osier-bed, but since it has been cut down every winter, with the exception of a small portion at one end which the owner kindly leaves for the benefit of the birds, I have only succeeded in finding one nest there in each season, instead of the three or more which we found when it was an overgrown jungle. The position of the nest in the osier-bed differs according to the growth of the plants suitable for it; if the meadow-sweet or willow-herb is not sufficiently grown, the birds will hang the nest in the stems of the willows, or even in nettles; this year, however, it was in willow-herb, and in a new spot over a wet ditch—the first time I have known it build in so moist a place. But this is not the new position which I wish to record. For the last two years another pair has taken to a hedge about two hundred yards from the osiers, which separates a corn-field from a hay-meadow adjoining the railway. In 1908 the singing was so persistent in this hedge that I took great pains to find a nest in the nettles and other plants under the hedge, or even in the corn; but I only succeeded in discovering what was plainly an attempt to twist some dry grass-stalks round the stems of two or three beans which were growing among the wheat. Apparently the beans did not answer the purpose, for nothing came of this attempt. This year, however, it was clear that a pair were at work near the same spot, and a nest was begun in meadow-sweet over a ditch at the bottom of the railway embankment, which unluckily again came to nothing, for it was exposed by the cutting of the long grass on the embankment just in front of it before it was more than half finished. The birds then reverted to the hedge; it would have been wiser of them to have taken to the osiers, where they invariably escape all molestation. But they seemed devoted to the same bit of tall hedge which they affected last year, and repeatedly sang in it while I listened sitting just below them; they sang, in fact, nearly all day long, beginning at about four a.m., as the haymakers in the meadow assured me. One morning I went there at five a.m., and after a little watching found a nest almost finished in cow-parsnip and nettles immediately under the hedge, and adjoining the corn. I regret to have to record that at nine a.m. on the same day this nest also was laid bare by someone prowling behind the hedge, and had of course to be abandoned. Even after this second misfortune the cock continued to sing for two

or three days, but by this time it was the last day of June, and I was unable to discover any further attempt to build. Meanwhile the pair in the osiers had safely brought up their young, and Mr. Aplin and I were just in time that same day to find the last young one just about to leave the nest.—W. WARDE FOWLER (Kingham, Chipping Norton).

Early Laying of the Cuckoo (*Cuculus canorus*) in Cheshire.—On the 30th April last I found an egg of this bird, along with one of a Pied Wagtail, in a nest which was built inside an old Blackbird's nest, on a ledge of rock in an old mine working at Alderley Edge. I consider this is an unusually early date for Cheshire. I heard the Cuckoo for the first time this year, at Alderley Edge, on the 26th April.—FRANK S. GRAVES (Ballamoar, Alderley Edge).

The Hobby (*Falco subbuteo*) and its Prey.—The following note on this handsome little Falcon is more in confirmation of a well-known fact than in recording anything new in its interesting habits, but, coming under one's personal observation for the first time, it seemed to possess a peculiar interest. It is with regret I record the death of two of this species in this part of Hants—one in May near Lymington, the other at the end of August near the river here. The former (a male) fell to the gun of a gamekeeper, who stoutly accused it of having destroyed a number of his young Pheasants, but on dissection the stomach of the hawk contained only the remains of insects, mostly Coleoptera, a few Diptera, and a small mass of what appeared to be fur or hair. The August specimen was killed by a man who was waiting at the riverside for the evening flight of Ducks, and the Hobby was doubtless following the Swallows to their roostings amongst the rushes, as it was killed at the same spot as one I recorded in 1892 under somewhat similar circumstances. This was a female in very bright and clean plumage, with no indication of having nested, and a noticeable feature in its appearance was the apparently swollen condition of the neck and throat; this was caused by the entire folded-up wings of a Bat, the membranes of which were somewhat torn, but the little stick-like bones were unbroken, the other portions of the Bat having passed into the stomach, where the head, with its sharp little teeth, was very conspicuous amongst the other remains. The stomach also contained a considerable mass of some large insects in an advanced stage of digestion, which my limited knowledge was unable to identify. From what I could make out, the insects had a broad yellow band across the upper portion of the body—something resembling the large sawfly (*Sirex gigas*)—but the body was flatter in shape, without the

yellow tail, and the unmistakable ovipositor of that grand hymenopteron. These insects, whatever they were, might have been swallowed within the body of the Bat, but they appeared to be the remains of a previous meal. Thus it seems the Hobby does not confine itself to one order of insects, although possibly preferring the Coleoptera, as I have seen it chasing members of the Odonata over the forest ponds, a sight not easily forgotten, as it was difficult to tell which was the more expert, the bird or the dragonfly; and the fact of it sometimes taking Bats has been recorded in these pages several times during the past thirty years, indicating that this species is sometimes on the wing later in the day than some of its congeners.—G. B. CORBIN (Ringwood, Hants).

The Stock-Dove in Breconshire.—Although not as numerous as in the English border counties, the Stock-Dove (*Columba aenae*) is here a not uncommon resident. A pair or two nest in most of the woods in the central parts of the county; it is also fond of breeding in the pollard-willows which fringe many of our streams, and in the old oak-trees in the Priory Grove adjoining the town of Brecon. One pair have passed the summer, and probably nested, in a grove of old oaks about a hundred yards from this house, for the last fifteen years at least. In May, 1898, they nested in this grove, in a hole in a tree, in which also a pair of Pied Flycatchers also bred, a distance of about six feet only separating the two nests. In May, 1901, a friend climbed to this same hole, and found a Stock-Dove's nest containing the unusual number of three eggs. In addition to their being rounder, smaller, and creamy, instead of pure white, most of the eggs of this Dove I have seen have another peculiarity which further distinguishes them from those of the Ring-Dove, in that they have a slightly rough shell, caused by little lines of raised surface running spirally across the eggs. Anyone unacquainted with its peculiar note might think it rare here, as it is a shy bird, and, owing to its very rapid flight, it is difficult to identify. The note of the Stock-Dove is but scantily described in our bird-books. It seems to me to resemble the word "woo-oop," repeated about eight times, the last syllable pronounced short and accentuated. This "song," which I often hear from the windows of my house, commences about the middle of March, continuing to about the end of August. It is also occasionally to be heard in the autumn.—E. A. SWAINSON (Woodside, Brecon).

Habits of Willow-Grouse.—In the P.Z.S. 1894, vol. i. pp. 411-12, &c., Dr. Einar Lönnberg tells us the mother of the "Ripoire" or hybrids was a female *Lyrurus tetrix*, and the father a male *Lagopus*

lagopus. Further, that the young hybrids, "when disturbed," perched in trees as the Black-game does, *unlike the Willow-Grouse*; and the italics are his. Does Dr. Einar Lönnberg mean to express that they perched in a different way from what Willow-Grouse do? I have seen scores of Willow-Grouse perch on trees!—J. A. HARVIE-BROWN (Dunipace, Larbert, Stirlingshire, N.B.).

The Dotterel in Jersey.—A specimen of the Dotterel (*Eudromias morinellus*) was shot by Sergeant Gale on the bare exposed stretch of common which runs along the coast near Les Landes on Aug. 17th. This species has been rarely obtained in Jersey, and its appearance at this period is accounted for as passing on migration, which usually occurs during August and September. It is a young male bird of the year, the white gorget showing but slightly, the black feathers on the crown of the head being edged with rufous, while the feathers on the back and upper parts are similarly marked. An examination of the gizzard exposed the remains of a green caterpillar, and the black wing-cases of beetles, with a quantity of small granite pebbles. Length, 9 in.; wing, 6 in.; weight, $4\frac{1}{2}$ oz.—H. MACKAY (Jersey).

Peewit Swimming.—On July 21st my brother and I, while standing close to a broad ditch between a barley-field and some meadow-land, saw a young Peewit (*Vanellus vulgaris*) swim across from the field side. We at first took it for a young Duck, of which there were several close by, but the curious shape of the back of the head, caused by the incipient crest, attracted attention. An adult bird of the same species, most likely one of the parents, had for some time been standing about on the meadow near the ditch, keeping probably an anxious watch on the movements of the chick on the other side of the water. On landing the young bird did not at once join its parent, but ran swiftly along the broken-down edge of the ditch, perhaps in search of a suitable place of concealment. That some waders—the Common Sandpiper and Redshank—can both swim and dive is well known, but this is the first time I have seen the Peewit do so.—G. T. ROPE (Blaxhall, Suffolk).

Large Clutch of Eggs in Nest of Lapwing (*Vanellus vulgaris*), and Early Arrival of Turtle-Dove.—Although such large numbers of Lapwings' eggs are taken every spring, I am only aware of two or three instances of more than four eggs in one nest having been recorded. On May 21st last I was fortunate enough to find a clutch of five eggs, one of which I noticed was an abnormally small one, being not much more than half the size of the largest. The usual date of arrival of the Turtle-Dove in this neighbourhood is about May 3rd, but

this year I heard one as early as April 17th, and again on the 24th of the same month ; while on May 28th I found a nest with eggs on the point of hatching.—CHARLES H. BENTHAM (Redhill, Surrey).

Eared Grebe near Lancaster.—On July 28th a fine specimen of the Eared Grebe (*Podiceps nigricollis*) was captured alive on a pond at Middleton, near Lancaster, it being an adult male in full summer plumage. It may be identified from the commoner species—the Slavonian Grebe (*P. auritus*)—by the end of the lower mandible coming up straight instead of being curved, as in the Slavonian species.—H. W. ROBINSON (Lansdowne House, Lancaster).

Bird Slaughter for Feminine Fashion.—I thoroughly agree with every word that Mr. Robert Warren says with regard to bird slaughter for feminine fashion (*ante*, p. 815). Nothing can be more detestable than the wholesale butchery of our most beautiful sea-birds, just at a season when they are performing their most important duties of nature. But I feel only too certain that milliners and persons who supply them with material will continue to trade in “plumes” as long as there is an available market. Indeed, unless strong measures are adopted and enforced by Government for the prevention of killing birds and exposing their skins and plumes for sale, I very seriously doubt whether any remarks, be they ever so strongly expressed, which may appear in our journals and text-books, will do much good. We must get at the buyers and wearers of bird-plumes rather than the sellers. We must endeavour to the utmost to impress our lady friends with the fact that the “plumes” which they wear in their hats are not ornamental decorations *as fashion fancies have taught them to believe* ; in reality they are hideous contorted effigies of what were once lovely birds. For many years I have made it a practice to acquaint women, old and young, with the fact that I strongly object to see the remains of birds stuck in their hats. I have objected on inartistic as well as sentimental grounds, and I am glad to say that in many cases I have, after a full discussion on the subject, influenced my hearers to accede to my views. Is it not a fact that women, as a race, do not care to wear ornamentation which is not considered “pretty and becoming”? Supposing, then, that *we* bird-lovers, whose criticisms of fashion on this particular point should carry considerable weight—as *we* are most intimately acquainted with the beautiful form and expression of the living bird, and unanimous in our opinion that in hats they look absolutely abominable—would only fully express on every available occasion to our lady friends our views on the subject, perhaps we might get them to substitute some other

form of hat-trimming. I believe that, if such ideas were more thoroughly ventilated, both in private conversation and from the public platform, that the "plume trade" might dwindle until it eventually became a drug in the market. It is a matter of straining every nerve to influence the buyers not to buy, and I have little doubt that a strong united effort in this direction would not meet with disappointing results. In conclusion, may I add that whenever I have had the pleasure of lecturing in public on birds, I have never allowed the opportunity to pass of expressing in the strongest terms possible how much I deprecate the scandalous habit which is practised by heartless men, even still in this great age of education, of destroying for utterly useless—aye, even for grim—purposes, the lives of our beautiful and interesting feathered friends.—C. J. PATTEN (University College, Sheffield).

P.S.—The above remarks refer chiefly to entire birds used as hat-trimmings. These are by far in a way the most objectionable, owing to the ghastly expression which the glaring and generally wrong coloured glass eyes give to the head, and the manner in which the body, wings, and tail are skewered out of shape. Single hat-feathers may appeal to the admiring eye of some people, though I must confess that to my mind all such decorations seem but a relic of barbarity, especially when we recall to our minds the elaborate and warlike feathered head-gear worn by some of the savage tribes of mankind. Nor are we at all justified in taking life for even the most beautiful of plumes, such as those of the well-known Egret.

Rare "British" Specimens.—Mr. Elms's allusion to the Kentish Plover (*ante*, p. 251), in connection with what he happily describes as "the appalling traffic in British-found eggs," interested me, as I had just received a beautiful fresh foreign clutch of that species, for which I gave in exchange a set of four Yellow Wagtail. There can be no doubt that the demand for "British-killed birds" and "British-taken clutches of eggs" not only threatens the extermination of several local species, as has already been the case with the Honey-Buzzard, but opens the door to many and various malpractices, especially with the facilities now afforded for safe and speedy transit by post from the Continent, and the quick journeys there and back which can now be made without a large outlay of money. I hardly realized this till a friend came to visit me here about a year ago, just after landing at Harwich with some unblown clutches in his possession, one of which belonged to a bird whose breeding-places in the United Kingdom could probably be counted on the fingers of one hand. At the present day an unscrupulous person could probably almost pay the expenses of a

trip to some parts of the Continent by bringing home unblown eggs, and disposing of them as "British." The same thing applies to birds. By the kindness of a distinguished Norwegian naturalist we have specimens of the Eagle-Owl, Snowy Owl, Gos-Hawk, Golden Eagle, and Gyr-Falcon, which have been received in the flesh, skinned, and mounted here. One Snowy Owl in particular arrived by post in such splendid condition that it might have been killed in this county, and its total cost to me, including postage, was well under half-a-sovereign! Perhaps in one case a careful *post-mortem* might have detected an attempted fraud, as a Snowy Owl I set up had its stomach full of fresh Lemmings, but it would be absolutely impossible to say whether an unblown clutch of White-tailed Eagle had or had not been laid in the British Islands. The market value of an admittedly foreign pair of eggs is about seven shillings, while a "British" set still unblown would find purchasers at twelve or twenty times that amount. A reference to last year's 'Zoologist' (p. 228) will show the exorbitant prices paid for the eggs of some other species.—JULIAN G. TUCK (Tostock Rectory, Bury St. Edmunds, Suffolk).

A M P H I B I A.

Occurrence of the Edible Frog (*Rana esculenta, forma typica*) in Surrey.—During last August I was surprised to find a small pond at Ockham alive with the above species. Not knowing before that these Frogs occurred in the county, I caught two (male and female), which I took to Mr. Boulenger, of the British Museum, and he supplied me with the following information of their introduction into Surrey:—

"Large numbers of Edible Frogs of the same variety (*forma typica*) were turned loose in small ponds near Chilworth by the late Dr. St. George Mivart, the specimens having been sent to him from Brussels by Mr. Boulenger. The following year Dr. Mivart again imported large numbers from Berlin, mostly of the variety *ridibunda*."

A few remarks on the habitat of this Frog may not perhaps be out of place here. They have a wide range, extending over the greater part of the Palæarctic region, and encroach upon the Ethiopian and Oriental regions. It is absent from Ireland, Scotland, Norway, and North Russia. In Asia it is not found north of Mongolia, Manchuria, and the Central Island of Japan. In the south it is found in Madeira, the Canary Isles, Morocco, north coast of Egypt, the head of the Persian Gulf, North Persia, Baluchistan, Turkestan, South China, Formosa, Hainan, and Siam. It occurs in few places in England, namely, Cambridge in Foulmire Fen, Thetford and Scoulton in

Norfolk, where, Mr. Boulenger informs me, it was introduced one hundred years ago. This species breeds in July. They have a very loud and noisy croak, and, indeed, it was owing to this that first drew my attention to them at Ockham.—GORDON DALGLIESH (29, Larkfield Road, Richmond, Surrey).

PISCES.

Capture of a Burbolt in Cattewater.—Mr. Richards, of 4, Hewers Row, Plymouth, whilst fishing for Bass, &c., at Turnchapel, caught a fine specimen of *Lota fluviatilis*. He was using the usual tackle on a rod. The fish measured 18½ in. long, and weighed about a pound. It belongs to the Codfish family, but exhibits some of the peculiarities of the Eel, and is sometimes called the Eel Pout. It is very rare in this district, and is usually taken in estuaries where there is fresh water. As stated by Couch, it is known as the Coney-fish, from an opinion formerly held that the creature called the Coney in the sacred Scriptures—the Arkeeko of Bruce—is the same with our common Rabbit; and this fish so far imitates the animal of the land as to pass much of its time, and seek its shelter in holes and overhanging banks of the rivers it frequents. It is common in Sweden, the North of Europe, and also in Siberia, as well as India. It is considered a delicacy, but its roe is said to be poisonous. At my suggestion, Mr. Richards presented it to the museum here.—WILLIAM HEARDER (195, Union Street, Plymouth).

To what Height can a Carp spring from the Water?—Most anglers and many dwellers near fish-ponds and meres are familiar with the sound of the heavy splash of a Carp. Have any of our readers noticed how far this fish can leap from the surface of the water? One of my sons returned recently from a day's fishing, bringing home in his can four specimens of *Cyprinus carpio*, averaging in weight about half a pound each. These were placed in a butt, the water of which did not reach within rather more than twelve inches of the top. One Carp threw itself out a few nights after, was found in the morning, and returned to its companions, apparently little the worse for the adventure. The following night another fish performed the same feat, this time with fatal effect. This seems a high leap for a Carp, as it naturally had to clear the top of the butt as well, but it is probably not unusual.—W. L. DISTANT.

NOTICES OF NEW BOOKS.

Report on the Sea Fisheries and Fishing Industries of the Thames Estuary. Part I. Prepared by Dr. JAMES MURIE. Waterlow Bros. & Layton, Lim.

THE notice of this real contribution to natural history is a little belated ; it is not the fault of author or publisher, but it having been sent to an old address of the Editor, the local postal authorities adhered to a rigid, hide-bound, red tape intelligence, and the book has only just reached our hands.

We know, more or less, the fauna of the Upper Thames, but of its estuary very little, especially of its ichthyology. 'The Zoologist' has contained from time to time many notes and some lists of its avian features, but of the inhabitants of its waters scarcely anything was known, save what information could be derived from the professional fisherman, the amateur angler, or the commercial fishmonger. Its surface is carefully buoyed, and its beacons and tides understood by the pilot, the strength (?) of its forts pigeon-holed at the War Office, and its charms—for it has such—appreciated by the Thames excursionist ; but Dr. Murie is the first naturalist who has given us any real contribution to its biology. And yet there has long been an ample material to utilize. There are "North Sea or deep-sea trawlers (Ramsgate, Dover, Folkestone, and Brightlingsea) ; offshore and inshore fisheries (Harwich, Tollesbury, West Mersea, Margate, Deal, Dungeness, &c.) ; estuarine fisheries (Maldon, Sheerness, Queenborough, Southend, and Leigh) ; besides the great shell industries (Whitstable, Faversham, Burnham, &c.), so characteristic of the conjoint counties" ; in fact, there was just the opportunity for a competent naturalist to write an instructive and pleasant book, which we should like to see on sale on every Thames excursionist steamer. For real biological information is not an esoteric doctrine, nor need it be written in an unknown

tongue, so far as terms and definitions are concerned ; and we really believe that even the excursionist, who knows his river so well, would like to know more of its inhabitants, but is under the impression that such information can only be obtained by the wise and prudent with scientific training, and is fain to think that a purely technical jargon always represents knowledge. And thus the great democracy, with its angling, gardening, bird and beast keeping proclivities, is generally without the least biological knowledge that can in any way be called scientific !

Dr. Murie resides at Leigh, and this little-known fishing station can now rank among those localities enshrined in the literature of natural history. The story of its evolution from a fishing village to a fishing station is related, and just as most sportsmen have an unrecorded warm corner in their hearts for the poacher, so the hardy fisherman will feel an interest in the story of "Smugglers and Coastguard," as told in this volume.

A mass of information is contributed as to the life-habits, including migration, of the fishes found in the Thames Estuary. The enumeration of the various vertebrates and invertebrates that constitute what is generally called Whitebait is very ample. The River Lamprey (*Petromyzon fluvialis*) is common, and we well remember taking one of these fish in the Ravensbourne, near Ladywell, many years ago. The Sturgeon can scarcely now be considered a Thames fish, though one was landed near Westminster Bridge, in 1867, which measured 7 ft. in length, and weighed 60 lb. The Bass, beloved by sea-anglers, still ascends the estuary, and is sometimes caught at Southend Pier-head. "For several months of the year, in the Thames estuary and the creeks along the Essex coast, Herrings of various ages and stages of growth muster in considerable force."

Of Mollusca, we read that on the Essex side of the Thames some of the oldest oystermen recall in mind when self-raised native Oysters were regularly taken in fair numbers inside the old Leigh-Middle, and on the Marshend side (Canvey) of the Channel. Leigh is the chief centre of the cockling (*Cardiidae*) trade ; the largest Cockles which Dr. Murie has examined came from Whitstable Bay, and the united shells of one—dried after cooking—measured $1\frac{3}{4}$ in. (over) transversely, and $1\frac{1}{2}$ in. long diameter, and $1\frac{1}{2}$ in. thick. But we must not quote further

from a book we have found a mine of information that we could not procure elsewhere.

Handbook to the Natural History of Cambridgeshire. Edited by
J. E. MARR, Sc.D., &c., and A. E. SHIPLEY, M.A., &c.
Cambridge University Press.

THIS book was compiled and published to appear at the time of the late meeting of the British Association at Cambridge, and, as stated, its object is to afford help to those students of natural history who desire to make observations in the Cambridgeshire district. Among well-known authorities, A. H. Evans deals with the Birds, H. Gadow with Reptiles and Amphibians, and R. Lydekker with Vertebrate Palaeontology. The insects are attended to by a number of rising entomologists, while the Physiography, Geology, Flora, and Prehistoric Archaeology receive full and careful treatment.

EDITORIAL GLEANINGS.

IN the last Report of the Zoological Gardens at Giza, near Cairo, by the Director, Capt. Stanley S. Flower, there are some interesting notes relating to the prisoners of the aquarium.

Fam. MORMYRIDÆ, *Gnathomenus cyprinoides* (Anooma).—Though in a state of nature their habits are apparently nocturnal, in captivity they soon learn to feed by daylight, and eagerly devour the finely chopped-up earthworms on which they are fed daily.

Fam. CHARACINIDÆ, *Hydrocyon forskali* (Kelb-el-Bahr, or Dog of the River).—The Kelb-el-Bahr is very active and voracious, feeding only on live fish, such as *Alestes*, which it pursues and captures with lightning-like agility, and either swallows whole or bites right in half, swallowing the half seized. It is found necessary to keep a lamp burning near their tanks all night, as if left in complete darkness they damage themselves swimming violently against the walls of the tank, but with a glimmer of light they avoid this.

Fam. SILURIDÆ, *Clarias lazera* (Armoot).—These fishes are fed on raw meat, and eat large quantities of it. After a meal the distended stomach quite alters the general appearance and shape of the fish. With a sufficiency of food a crowd of individuals will live amicably together, but hunger leads to internecine warfare.

Fam. SERRANIDÆ, *Lates niloticus* (Ishr, or Great Nile Perch).—One of the most noticeable points about the Ishr is its gleaming eyes, which in some lights glow red like dull signal lamps; another is its power of rapidly changing its colour, and the appearance and disappearance of dark markings all over the sides of the body; further observations are wanted concerning when and how this is carried out.

Mammals in captivity seem to have a considerable mortality. Twenty accidental deaths include nine Jackal puppies eaten by their mothers, a Lion cub which choked itself eating a piece of meat, an Angora Goat which fell into a canal and drowned, and several animals and birds which met their deaths fighting their companions in the same cages.

Among other deaths, six of nine Lemurs died of dysentery (ulcerative colitis) between Jan. 11th and Feb. 26th, one died from the result

of an accident, one apparently from old age, and the remaining one from unknown causes. Several of the Monkeys died from dysentery about the same time as this disease appeared among the Lemurs; three died of tuberculosis; others of pneumonia and severe constipation, but, as usual in many cases, it was impossible to determine the cause of death, all the organs appearing healthy.

AN unusual incident occurred on a recent Sunday in St. James's Park. Just when the walks were beginning to be thronged by visitors after church, the birds were seen to be in a great state of perturbation, huddling together, or hurrying to take shelter in the bushes. The cause was soon discerned in a Hawk, which soared in wide circles over the park, at a height of eighty or a hundred yards. Presently an unwary Pigeon came in view, flying in the direction of St. James's. The Hawk made a swoop, and struck the Pigeon, which fell into the shrubbery on the north side of the lake near the bridge. The Hawk remained poised in the air, and then circled round and round again, rising and falling, and sometimes swooping so low in search of its quarry that it would have been an easy shot. After about a quarter of an hour it gave up the search, and soared away westward. Soon afterwards the Pigeon fluttered out of the shrubbery on to the mown lawn, and lay there helplessly beating its wings. A park-keeper, whose attention was called to its condition, speedily put it out of pain. It was found to have a deep wound in its breast, large enough to put the end of a finger in. The park-keeper said that during a long period of service he had never before known such a thing to happen, and had never noticed a Hawk near the park. It was certainly a surprising instance of audacity, though it was surpassed about two years ago by a Hawk actually killing a Pigeon right in front of the Guildhall during the busiest time of the day.—*Shooting Times and Brit. Sportsman.*

THE actual records of net-fishing tend to make one sceptical of all theories, whether propounded by men of science or sportsmen, to account for the increase or decrease of fish. Take Salmon, for example. How carefully it has been explained, over and over again, that a great supply under modern conditions is impossible. But suddenly, and without any assignable reason, the Salmon have returned in unheard-of numbers to the Tweed and its tributaries. Few sportsmen who had the luck to share last autumn's fly-fishing will forget it, and the catches by net during the present year have, says 'Country Life,' been

also unparalleled. In one cast of the net forty-two fine fish were taken from one of the less important tributaries a few days ago. The truth is, we know very little of the life-history of fishes. A few years ago it was believed that the shoals of Herring had been driven from our shores by steamships and trawlers, and yet the last two seasons have broken all previous records.—*St. James's Gazette.*

In the 'Avicultural Magazine' for August, Mr. D. Seth-Smith records his success in breeding in captivity the Tataupa Tinamou (*Crypturus tataupa*), a Brazilian species. A peculiar habit of the adult bird, when alarmed, was recorded by Azara, of squatting on the breast, and throwing the tail into the air, forming the under tail-coverts into a screen to hide the rest of the body, and thereby becoming practically invisible amongst herbage or undergrowth of any kind. Mr. Seth-Smith also found this habit developed to a moderate extent in the very young chicks; they too will, when they suspect danger, squat and throw up their little tails, almost always arranging that the latter shall be towards the object of their alarm.

A Sign of the Times.—A church has been converted into a museum under municipal control at King's Lynn.—*Museums Journal.*

We have received a privately printed Catalogue of the Australian Birds' Eggs and Nests in the collection of Dr. Le Souëf, the Director of the Zoological Gardens, Melbourne. We quite envy Dr. Le Souëf in its possession, and it forms in itself a considerable addition to the knowledge of Australian ornithology.

We understand that Mr. Richard Kearton has made such an excellent recovery from the operation he recently underwent for appendicitis, that he is now hard at work writing his new Nature Story Book, and that it will be published by Messrs. Cassell & Co. during the autumn.

THE study of economic entomology as applied to agriculture has long been a feature in the enlightened domestic policy of the United States Government. A vindication of this work may be found in a "Report on the Habits of the Kelep, or Guatemalan Cotton-Boll-

Weevil-Ant," by O. F. Cook ; published at the Government Printing Office, Washington.

An ant has been discovered in Guatemala which attacks and kills the adult Boll-Weevil (*Anthonomus grandis*, Boh.), and thus holds this most injurious insect in check, and permits the regular harvesting of a crop of cotton, even under conditions favourable to the weevil. This ant, known as the "Kelep" in the Kekchi language of Alta Vera Paz, Guatemala, is carnivorous and predaceous ; it injures no form of vegetation, and takes nothing from the cotton-plant except the nectar secreted for it on the leaves and floral envelopes. The habits and temperament of the insect are such that it is readily capable of domestication, transportation, and colonization in the cotton fields of Texas. Many colonies have already been introduced at Victoria from Guatemala, and a peculiar habit of these ants was observed. When the insects were being liberated after a month of captivity, almost the first thing they did was to bring out their dead ants, and carry them as far from their nests as the boundaries of their enclosures would permit. It now remains to be seen whether the Keleps will survive the winter climate of Texas, and whether they can be obtained or propagated in sufficient numbers to serve the practical purpose for which they have been introduced.



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